

## CLAIMS

1. A vertically adjustable armrest assembly for a chair comprising:
  - a support connected to said chair and extending generally in a vertical direction, said support having an open top;
  - a structure connected to the support having a series of vertically aligned openings;
  - a slide element for supporting an armrest disposed within said support and extending out of said open top thereof, said slide element positioned adjacent said structure with the openings, and said slide having a lateral opening;
  - a horizontally movable block positioned in said slide element lateral opening, said block for being received selectively in said openings of said structure;
  - a rod extending generally parallel to said slide element, said rod having a handle at an upper end portion thereof and a misaligned portion, said misaligned portion operatively connected to said block for selectively moving said block into and out of openings in said structure; and
  - a biasing element connected to said rod for biasing said rod to a predetermined position.
2. The vertically adjustable armrest of claim 1 wherein:
  - said block includes a slanted opening through said block; and
  - said rod includes a structure for engaging said block through said slanted opening in said block.
3. The vertically adjustable armrest of claim 2 wherein:
  - said rod includes front and rear slanted surfaces acting as cams; and

said block includes front and rear surfaces around said slanted opening for acting as cam followers.

4. The vertically adjustable armrest of claim 3 wherein:  
said front slanted surface of said rod pushes said front surface of said block to lock said armrest; and

said rear slanted surface of said rod pushes said rear surface of said block to unlock said armrest.

5. The vertically adjustable armrest of claim 1 wherein:  
said block includes an opening for receiving said rod therethrough.

6. The vertically adjustable armrest of claim 5 wherein:  
said block opening is slanted;  
said misaligned portion of said rod includes a slanted surface acting as a cam against a cam follower surface formed around said block opening.

7. The vertically adjustable armrest of claim 6 wherein:  
said slide element includes a vertically oriented slot for accommodating said misaligned portion of said rod.

8. The vertically adjustable armrest of claim 1 wherein:  
said slide element includes a longitudinal slot for guiding said rod.

9. The vertically adjustable armrest of claim 1 wherein:  
said lateral opening of said slide is a guide for said block when said block moves into and out of an opening in said plate.

10. The vertically adjustable armrest of claim 1 wherein:

said biasing element is a spring located between said rod and said slide element.

11. The vertically adjustable armrest of claim 1 wherein:  
said support is a guide for said slide element.
12. The vertically adjustable armrest of claim 1 wherein:  
said slide includes an upper base with an opening; and  
said rod includes an upper arm for riding in said opening of said upper base.
13. The vertically adjustable armrest of claim 1 wherein:  
said structure is a plate;  
said plate includes a cylindrical projection; and  
said support includes an opening for receiving said cylindrical projection.
14. The vertically adjustable armrest of claim 4 wherein:  
said slide element includes a longitudinal slot for guiding said rod.
15. The vertically adjustable armrest of claim 14 wherein:  
said lateral opening of said slide is a guide for said block when said block moves  
into and out of an opening in said plate.
16. The vertically adjustable armrest of claim 15 wherein:  
said support is a guide for said slide element.
17. The vertically adjustable armrest of claim 4 wherein:  
said structure is a plate;  
said plate includes a cylindrical projection; and  
said support includes an opening for receiving said cylindrical projection.
18. The vertically adjustable armrest of claim 17 wherein:

said slide includes an upper base with an opening; and

said rod includes an upper arm for riding in said opening of said upper base.

19. The vertically adjustable armrest of claim 18 wherein:

said support is a guide for said slide element.

20. The vertically adjustable armrest of claim 19 wherein:

said slide element includes a longitudinal slot for guiding said rod; and

said lateral opening of said slide is a guide for said block when said block moves into and out of an opening in said plate

21. A vertically adjustable armrest assembly for a chair comprising:

a vertically movable slide element having an upper portion for mounting a horizontally adjustable armrest assembly, said slide element having an opening;

a horizontally slidable block mounted in said opening of said vertically movable slide element, said block having a slanted opening;

an elongated rod having an operating handle and a cam surface, said cam surface being mounted in said opening of said block wherein vertical movement of said rod causes horizontal sliding movement of said block;

a spring for biasing said rod to a predetermined position;

a plate having vertically aligned openings, each opening for selectively receiving said block; and

a structure for supporting said vertically movable slide element, said block, said rod, said spring and said plate.

22. The vertically adjustable armrest of claim 21 including:

first and second horizontal slide elements mounted to said upper portion of said vertically movable slide element.

23. The vertically adjustable armrest of claim 22 wherein:  
said cam surface is slanted; and  
said block includes a slanted surface bordering said slanted opening.
24. The vertically adjustable armrest of claim 23 wherein:  
said spring is mounted between said rod and said vertically movable slide element.
25. The vertically adjustable armrest of claim 24 wherein:  
said vertically movable slide element includes an elongated guide slot for said rod.
26. The vertically adjustable armrest of claim 25 wherein:  
said vertically movable slide element includes a slot for said spring.
27. The vertically adjustable armrest of claim 26 wherein:  
said opening of said vertically movable slide element has a cross shape.
28. The vertically adjustable armrest of claim 27 wherein:  
said opening of said vertically movable slide element has an inverted "T" shape.